

II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings:

1-9. (Cancelled)

10. (Previously Presented) A method over a collision LAN that comprises a plurality of stations physically connected over a shared transmission medium, for enabling a collision-free protocol for concurrently transmitting frames between all or part of the plurality of stations, the method comprising the steps of:

forming a logical ring among all or part of the plurality of physically connected stations, the forming step including:

upon starting insertion of said joining station,

issuing an RIR (Ring Insert Request) message towards an assumed RM (Ring Manager);

starting an RIT (Ring Insert Timer);

checking whether an RIG (Ring Insert Granted) message is received or not;

if said RIG is received, inserting said joining station in said logical ring to complete said insertion of said joining station in said logical ring;

if said RIG is not received, checking whether an RID (Ring Insert Denied) message is received,

if said RID is received, restarting insertion of said joining station;

if said RID is not received, checking whether said RIT has elapsed;

if said RIT has not elapsed, resuming at checking RIG step; and

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if said RIT has elapsed, issuing said RID message, self-electing said joining station to play the role of RM;
circulating a token between stations of the logical ring; and
transmitting from any one station that is part of the logical ring only while holding the token, to prevent collisions from happening upon transmitting over the shared transmission medium.

11. (Previously Presented) The method of claim 10, wherein said RM, upon issuing said RIG message towards said joining station, also issues an RIU (Ring Insert Update) message to an immediate previous station over said logical ring.

12. (Currently Amended) The method of claim 10, wherein said forming step includes, in a station wishing to leave said logical ring, the further steps of:

upon starting removal of said leaving station, checking whether said leaving station is said RM or not;

if said leaving station is said RM, setting a flag in an RRF (Ring Removal Forward) message;

if said leaving station is not said RM, skipping the setting step;

issuing said RRF to said immediate next station of said logical ring; and

issuing an ~~RFB~~ RRB (Ring Removal Backward) message to said immediate previous station of said logical ring.